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In the Claims

Please amend the claims as follows:

1. (Cancelled)

2. (Previously presented) A chimeric polypeptide comprising:
a virus coat polypeptide sequence and a viral receptor polypeptide sequence, wherein the coat polypeptide sequence and the receptor polypeptide sequence are linked by an amino acid spacer of sufficient length to allow the coat polypeptide sequence and the viral receptor polypeptide sequence to bind to each other wherein the chimeric polypeptide has an amino acid sequence selected from the group consisting of SEQ ID NO: 13, SEQ ID NO: 2, SEQ ID NO: 4 and SEQ ID NO: 6.

3. (Previously presented) A chimeric polypeptide comprising:
a virus coat polypeptide sequence and a viral receptor polypeptide sequence, wherein the coat polypeptide sequence and the receptor polypeptide sequence are linked by an amino acid spacer of sufficient length to allow the coat polypeptide sequence and the viral receptor polypeptide sequence to bind to each other wherein the virus coat polypeptide sequence is selected from the group consisting of SEQ ID NO: 24, SEQ ID NO: 30 and SEQ ID NO: 28.

4. (Original) The chimeric polypeptide according to claim 3, where the receptor polypeptide sequence is selected from the group consisting of SEQ ID NO: 26 and SEQ ID NO: 20.

5. – 9. (Cancelled)

10. (Currently amended) The chimeric polypeptide of claim 4 ~~1~~, wherein the spacer has from about 5 to about 200 amino acids.

11. (Currently amended) The chimeric polypeptide of claim 4 ~~1~~, wherein the spacer comprises a peptidomimetic sequence.

12. (Currently amended) The chimeric polypeptide of claim 4 ~~1~~, further comprising a heterologous domain.

13. (Original) The chimeric polypeptide of claim 12, wherein the heterologous domain is selected from the group consisting of: a tag, an adhesin, and an immunopotentiating agent.

14. (Previously presented) The chimeric polypeptide of claim 12, wherein the heterologous domain is SEQ ID NO: 32.

15. (Original) The chimeric polypeptide of claim 2, further comprising a pharmaceutically acceptable carrier.

16. (Original) The chimeric polypeptide of claim 4, further comprising a pharmaceutically acceptable carrier.

17. -38. (Cancelled)

39. (Currently amended) A method for producing an immune response to a HIV virus in a subject comprising administering to the subject an effective amount of the chimeric polypeptide of claim 4 ~~2~~, to produce the ~~an~~ immune response to the HIV virus.

40. (Cancelled)

41. (Original) The method of claim 39, wherein the subject is a human.

42. (Currently amended) The method of claim 39, wherein the immune response comprises inducing antibody production.

43. (Original) The method of claim 42, wherein the antibody binds to an epitope produced by the binding of the virus coat polypeptide sequence and the receptor polypeptide sequence.

44. (Original) The method of claim 42, wherein the antibody neutralizes the virus *in vitro*.

45. (Currently amended) A method for identifying an agent that inhibits an interaction between a HIV virus and a virus co-receptor comprising the steps of: (a) contacting the chimeric polypeptide of claim ~~2~~ 4 with a virus co-receptor under conditions allowing the chimeric polypeptide and the co-receptor to bind, in the presence and absence of a test agent; and (b) detecting binding in the presence

and absence of the test agent, wherein decreased binding in the presence of the test agent thereby identifies an agent that inhibits binding between the virus and the virus co-receptor.

46. (Cancelled)

47. (Original) The method of claim 45, wherein the immunodeficiency virus co-receptor is a CCR5 or CXCR4 polypeptide sequence.

48. (Original) The method of claim 45, wherein the virus co-receptor is present on the surface of an intact cell.

49. (Currently amended) A method for identifying an agent that inhibits an interaction between a HIV virus and a virus receptor comprising the steps of: (a) contacting the chimeric polypeptide of claim ~~2~~ 4 with a test agent; and (b) detecting binding between the virus coat polypeptide sequence and the viral receptor polypeptide sequence, wherein a decreased amount of binding in the presence of the test agent identifies an agent that inhibits binding between the virus and the virus receptor.

50. (Original) The method of claim 49, wherein the test agent is selected from the group consisting of a peptide, an organic molecule, an antibody, an antiviral, an immunodeficiency virus receptor or functional fragment thereof.

51. – 54. (Cancelled)

55. (Previously presented) The chimeric polypeptide according to claim 4 comprising SEQ ID NO: 30, SEQ ID NO: 26 and further comprising IgG1 as an immunopotentiating agent.

56.- 57. (Cancelled)

58. (New) The chimeric polypeptide according to claim 4 comprising SEQ ID NO: 24, SEQ ID NO: 26 and further comprising IgG1 as an immunopotentiating agent.

59. (New) The chimeric polypeptide according to claim 4 comprising SEQ ID NO: 30, SEQ ID NO: 26 and further comprising IgG1 as an immunopotentiating agent.

60. (New) The chimeric polypeptide according to claim 59, wherein IgG1 comprises SEQ ID NO: 32.

61. (New) The chimeric polypeptide according to claim 4 comprising SEQ ID NO: 28, SEQ ID NO: 26 and further comprising IgG1 as an immunopotentiating agent.

62. (New) The chimeric polypeptide according to claim 4 comprising SEQ ID NO: 30, SEQ ID NO: 20 and further comprising IgG1 as an immunopotentiating agent.

63. (New) The chimeric polypeptide according to claim 4 comprising SEQ ID NO: 24, SEQ ID NO: 26 and further comprising IgG1 as an immunopotentiating agent.

64. (New) A method for producing an immune response to a HIV virus in a subject comprising administering to the subject an effective amount of the chimeric polypeptide of claim 55, to produce an immune response to the HIV virus.

65. (New) A method for producing an immune response to a HIV virus in a subject comprising administering to the subject an effective amount of the chimeric polypeptide of claim 63, to produce an immune response to the HIV virus.

66. (New) A method for producing an immune response to a HIV virus in a subject comprising administering to the subject an effective amount of the chimeric polypeptide of claim 59, to produce an immune response to the HIV virus.

67. (New) A method for producing antibodies to a HIV virus in cells *in vitro* comprising administering an effective amount of the chimeric polypeptide of claim 4 to generate antibodies, wherein the antibodies bind to an epitope produced by the binding of the virus coat polypeptide sequence and the receptor polypeptide sequence.

68. (New) The method of claim 67, wherein the antibody neutralizes the virus *in vitro*.

69. (New) A method for identifying an agent that inhibits an interaction between a HIV virus and a virus co-receptor comprising the steps of: (a) contacting the chimeric polypeptide of claim 63 with a virus co-receptor under conditions allowing the chimeric polypeptide and the co-receptor to bind, in the presence and absence of a test agent; and (b) detecting binding in the presence and absence of the test

agent, wherein decreased binding in the presence of the test agent thereby identifies an agent that inhibits binding between the virus and the virus co-receptor.